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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/320,252	05/26/1999	PAUL EVAN MATZ	02950.P033	4390

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SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. BOX 2938
MINNEAPOLIS, MN 55402

EXAMINER

ENGLAND, DAVID E

ART UNIT PAPER NUMBER

2143

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/320,252

Applicant(s)

MATZ ET AL.

Examiner

David E. England

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>03/03/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Claims 1, 5, 7 – 13, 15, 19, 20 and 24 – 27 are presented for examination.

Claim Objections

2. Claims 28 and 48 are objected to because of the following informalities: The claim language states, “generate an transaction event”, which should read, “generate a transaction event”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 36 and 46 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 36 and 46 recite, “the available thread is a member of a class of threads that are included in the pool of threads”. This limitation is not described in the specification. The specification states on page 21, lines 2 – 5, “*In one embodiment of present invention, specific*

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threads may be members of a "real-time" process priority class, and a task having a "real-time" priority will be attributed to such threads by the scheduler." As can be seen, there is no mention of another embodiment of the invention having a thread as a member of a "class" of threads **and** "included in the pool of threads". The section of the specification could be interpreted as the one embodiment of the invention **replacing** one "giant pool" of threads with smaller pools or "classes" of threads that are more specific to their allocated tasks. If the Applicant can point to specific sections of the specification where the claim language is supported, the rejection will be withdrawn.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 28 – 48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claims 28, 37 and 47 recite a method or system for "executing a transaction routing task". There is no disclosure or teachings of the transaction routing task being executed in any part of the claim nor when it is executed. All that is stated is the movement of transaction routing tasks from queues to threads utilizing attributes.

8. The term "dynamically assigning a new priority" in claims 28, 37, 47 and 48 is a relative term which renders the claim indefinite. The term "dynamic" is not defined by the claim, the

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specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The claim language states, “the distributing of the transaction routing task to the available thread being responsive to dynamically assigning a new priority to the transaction routing task”. There is no mention previous to this statement that there is a prior priority assigned to the transaction routing task. Therefore, how could there be a new priority assigned to a transaction routing task if there is no previous priority assigned. Furthermore, if there is no previous priority assigned to the transaction routing task, how could a new priority by “dynamically assigned”, also there is no disclosure as to what makes this assigning of a priority “dynamic”.

9. Claims 34 and 44 recite, “assigning the thread priority to the available thread based on a priority of the transaction routing task distributed to the available thread,” appears to assign priority to a transaction routing task in a thread that already has a priority. There are numerous sections of the specification that state priority to a thread but it is unclear which section of the specification this limitation would belong to. Applicant is asked to point to specific sections of the specification to clear up the meaning of the limitation with possible amendments.

10. Claims 35 and 45 recite, “determining a best match between the transaction routing task and the available thread,” in which there is no disclosure as to how this determination step is carried out nor is there any teachings as to what constitutes the “best match”. Applicant is asked to amend to further specify how this determination is conducted and what would be considered the criteria for the “best match”.

11. All dependent claims not specifically mentioned above are rejected for their dependency on the above-discussed claims.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neil (6134318) in view of Sequeira (6222530).

14. Referencing claim 28, as closely interpreted by the Examiner, O'Neil teaches a method of executing a transaction routing task, the method including:

15. receiving a transaction request at an automatic call distribution system, (e.g. col. 6, line 60 – col. 7, line 15);

16. generating an transaction event responsive to receiving the transaction request, the transaction event for routing the transaction request to an agent of the automatic call distribution system, (e.g., col. 6, line 60 – col. 7, line 20);

17. responsive to the transaction event, identifying a workflow associated with the transaction event, (e.g., col. 7, lines 21 – 61);

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18. distributing the transaction routing task, which at least partially executes the workflow, from a task queue to an available thread within a plurality of threads operating within a multiprocessor system, the distributing of the transaction routing task to the available thread being responsive to dynamically assigning a new priority to the transaction routing task, (e.g., col. 7, lines 8 – 15, col. 10, line 65 – col. 11, line 12 & col. 12, line 48 – col. 13, line 3);

19. identifying a processor affinity attributed to the transaction routing task, (e.g., col. 12, line 58 – col. 13, line 3); and

20. assigning the available thread to a processor within the multiprocessor system according to the processor affinity attributed to the transaction routing task to route the transaction request to the agent of the automatic call distribution system, (e.g., col. 12, line 58 – col. 13, line 3), but does not teach thread pool. Sequeira teaches a thread pool, (e.g. col. 5, line 46 – col. 6, line 6 & col. 9, lines 16 – 31). It would have been obvious to one skilled in the art at the time the invention was made to combine Sequeira with O'Neil because if an incoming task that is important, needs to be completed first, it could be sent to the next available thread within the pool of threads before the other tasks and be processed sooner.

21. Referencing claim 29, as closely interpreted by the Examiner, O'Neil teaches the transaction routing task includes any one from a group of transaction routing tasks including receipt of a telephone call, receipt of a hang up, a request to store data, a request to retrieve data, a request to generate a user interface for the agent, (e.g., col. 6, line 60 – col. 7, line 7).

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22. Referencing claim 30, as closely interpreted by the Examiner, O'Neil teaches the telephone call includes at least one of a telephone call received via a public switched telephone network and a voice-over-IP call received via the Internet, (e.g., col. 6, lines 18 – 48 & col. 7, line 53 – col. 8, line 10).

23. Referencing claim 31, as closely interpreted by the Examiner, O'Neil teaches the agent includes at least one of a human agent and a software agent, (e.g., col. 6, line 60 – col. 7, line 7).

24. As to claim 32, as closely interpreted by the Examiner, O'Neil does not specifically teach the transaction routing task has a real-time priority and is distributed in accordance with the real-time priority to the available thread within the pool of threads. Sequeira teaches the transaction routing task has a real-time priority and is distributed in accordance with the real-time priority to the available thread within the pool of threads, (e.g. col. 5, line 46 – col. 6, line 6 & col. 9, lines 16 – 31). It would have been obvious to one skilled in the art at the time the invention was made to combine Sequeira with O'Neil because if an incoming task that is important, needs to be completed first, it could be sent to the next available thread within the pool of threads before the other tasks and be processed sooner.

25. Referencing claim 33, as closely interpreted by the Examiner, O'Neil teaches assigning the available thread to a processor within the multiprocessor system according to a thread priority, (e.g., Abstract, col. 7, lines 8 – 15, col. 10, line 65 – col. 11, line 12 & col. 12, line 48 – col. 13, line 3).

26. Referencing claim 34, as closely interpreted by the Examiner, O'Neil teaches assigning the thread priority to the available thread based on a priority of the transaction routing task distributed to the available thread, (e.g., Abstract, col. 7, lines 8 – 15, col. 10, line 65 – col. 11, line 12 & col. 12, line 48 – col. 13, line 3).

27. Referencing claim 35, as closely interpreted by the Examiner, O'Neil teaches determining a best match between the transaction routing task and the available thread, (e.g., Abstract, col. 7, lines 8 – 15, col. 10, line 65 – col. 11, line 12 & col. 12, line 48 – col. 13, line 3).

28. Claim 37 – 45, 47 and 48 are rejected for similar reasons as stated above.

29. Claims 36 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neil and Sequeira as applied to claims 27 and 37 above, and in further view of Kimmel et al. (6105053) (hereinafter Kimmel).

30. As to claim 36, as closely interpreted by the Examiner, O'Neil and Sequeira do not specifically teach the available thread is a member of a class of threads that are included in the pool of threads, the class of threads being associated with the priority. Kimmel teaches the available thread is a member of a class of threads that are included in the pool of threads, the class of threads being associated with the priority, (e.g., col. 6, lines 1 – 21). It would have been

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obvious to one of ordinary skill in the art at the time the invention was made to combine Kimmel with the combine system of O'Neil and Sequeira because a "thread group" is a set of closely-related threads within a process that will tend to access and operate on the same data. Handling these related threads as a single globally schedulable group promotes a closer relationship between the threads in the group and individual JPs or groups of JPs, thereby improving the ratio of cache hits and overall system performance.

31. Claim 46 is rejected for similar reasons as stated above.

Response to Arguments

32. Applicant's arguments with respect to claims 28 – 48 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

33. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

34. a. Edwards et al. U.S. Patent No. 6650748 discloses Multiple call handling in a call center.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to David E. England whose telephone number is 571-272-3912.

The examiner can normally be reached on Mon-Thur, 7:00-5:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David E. England
Examiner
Art Unit 2143

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DAVID WILEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100